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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,702	12/04/2003	Thomas B. Wilborn	030485	4003

23696 7590 07/05/2007  
QUALCOMM INCORPORATED  
5775 MOREHOUSE DR.  
SAN DIEGO, CA 92121

EXAMINER
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SAFAIPOUR, BOBBAK

ART UNIT	PAPER NUMBER
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2618

NOTIFICATION DATE	DELIVERY MODE
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07/05/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	Application No. 10/730,702	Applicant(s) WILBORN ET AL.	
	Examiner Bobbak Safaipoor	Art Unit 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-20, 27, 28 and 33-36 is/are allowed.
- 6) ☒ Claim(s) 1-11, 21-26 and 29-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Action is in response to Applicant's response filed on 4/4/2007. New claims 33-36 have been added to the application. Claims 1-36 are now pending in the present application.

**This action is made FINAL.**

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-7, 8-11, 21-26, and 29-32 have been fully considered but they are not persuasive.

In the present application, Applicant essentially argues that Schwarz et al (US 2006/0111110) fail to teach all of the features of independent claims 1, 8, 29, and 32. First, Applicant's argue that Schwarz does not disclose "a controller operative to categorize cells in a first wireless communication system based on a plurality of states." Schwarz et al disclose "each state is associated with information indicating, for example, whether or not timing and cell information have been obtained for a cell." The cited sections of Schwarz do not disclose categorizing cells based on states.

Examiner respectfully disagrees. Schwarz et al clearly disclose that the quality of the serving cell and the quality of at least one neighbour cell are measured by the user equipment (paragraph 69). Then, the measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbour cell (read as "categorized ... based on a plurality of states"). The target cell is based on the ranking. (paragraph 69) The recited claim language is given the broadest reasonable interpretation; therefore, Schwarz et al disclose categorizing cells based on states.

Second, Applicant's argue that Schwarz et al does not disclose "prioritize the plurality of states." In paragraph 69, Schwarz discloses ranking cells based on measured quality of the cells. Ranking cells based on measured quality may not achieve the same results as prioritizing the states. For example, a cell with a low priority state but high measured quality may be ranked low in accordance with claim 1 but high by Schwarz.

Examiner agrees that ranking cells based on measured quality may not achieve the same results as prioritizing the states. However, the claim language does not specifically disclose that a cell with a low priority state but high measured quality may be ranked low. This is just one of numerous examples how cells can be ranked. Because of the broadness of the claim language, prioritizing the plurality of states can be read as ranking cells based on the measured quality of cells, as shown in paragraph 69.

Third, Applicant's argue that Schwarz et al does not disclose "prioritize cells in a second wireless communication system relative to the plurality of states." The cited sections of Schwartz do not disclose two wireless communication systems and further do not disclose prioritizing cells in one system relative to states for cells in another system.

Examiner respectfully disagrees. Schwarz et al clearly disclose that the user equipment camps on the serving cell that uses a different radio-access technology from that used by the neighbour cell (read as two wireless communication systems). (paragraph 72) Then the inter-radio access technology measurement threshold is adjusted. After adjusting, the cell change procedures are performed by measuring the quality of the serving cell; triggering inter-radio access technology measurements on the neighbour cell based on the measured quality of the serving cell and the inter-radio access technology measurement threshold (read as prioritizing

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cells in one system relative to states for cells in another system). (paragraph 72) The recited claim language is given the broadest reasonable interpretation; therefore, Schwarz et al disclose prioritizing cells in a second wireless communication system relative to the plurality of states.

Fourth, Applicant's argue that Schwarz et al does not disclose "select a cell in the first system or the second system based on priorities of the cells in the first and second systems, and schedule the selected cell for measurement in next available frame." Rather, in paragraph 70, Schwarz discloses "measurements on the neighbour cell 320 are triggered based on measured quality of the serving cell 310 and the quality threshold of the serving cell 310." Schwarz thus selects the neighbour cell 320 for measurement based on different criteria (measured quality and quality threshold) than the criteria (priorities).

Examiner respectfully disagrees. As discussed above, Schwarz et al disclose after triggering inter-radio access technology measurements on the neighbour cell based on the measured quality of the serving cell and the inter-radio access technology measurement threshold, the cell change procedure then selects the target cell based on the inter-radio access technology measurement. (paragraphs 72-73) The recited claim language is given the broadest reasonable interpretation; therefore, Schwarz et al disclose selecting a cell in the first system or the second system based on priorities of the cells in the first and second systems, and scheduling the selected cell for measurement in next available frame.

As a result, the argued features are written such that they read upon the cited reference; therefore, the previous rejection still applies.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-11, 21-26, and 29-32** rejected under 35 U.S.C. 102(e) as being anticipated by **Schwarz et al (United States Patent Application Publication #2006/0111110 A1).**

Consider **claim 1**, Schwarz et al disclose the claimed invention wherein an apparatus operable to schedule measurement for cells in a plurality of wireless communication systems (paragraph 23), comprising:

a controller operative to categorize cells in a first wireless communication system based on a plurality of states, prioritize the plurality of states, prioritize cells in a second wireless communication system relative to the plurality of states, select a cell in the first system or the second system based on priorities of the cells in the first and second systems, and schedule the selected cell for measurement in next available frame (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking);

and a demodulator operative to make measurement for the selected cell in the next available frame (paragraph 70; At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered

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based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 2**, and **as applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the controller is operative to update states of the cells in the first system based at least on measurement results obtained from prior frames (paragraph 70; At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 3**, and **as applied to claim 2 above**, Schwarz et al disclose the claimed invention wherein the controller is operative to update the states of the cells in the first system are further based on information for number of failed attempts to acquire timing information, number of failed attempts to acquire cell identification, and elapsed time since last selection for measurement (figure 6; paragraphs 6, 7, and 57; At least one element of said control information is adjusted, before the control information is received, according to a predetermined time pattern, thus forming adjusted control information. Therefore, the cell change procedures are controlled based on said adjusted control information).

Consider **claim 4**, and **as applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the controller is further operative to rank cells in the first system with same state, for each of the plurality of states, and to select a cell for measurement further based on the ranking of the cells in the first system (paragraph 69; The measured cells are ranked based on the

measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking).

Consider **claim 5**, and **as applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the apparatus is implemented within a user equipment (wireless communication device) (paragraphs 6, 7, 9, 21, 23, 42).

Consider **claim 6**, and **as applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the first and second systems utilize different radio access technologies (RATs) (paragraph 21; The invention can be applied to a mobile communication system comprising more than one radio access technology to which the user equipment can be connected).

Consider **claim 7**, and **as applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the first system is a Global System for Mobile Communications (GSM) system and the second system is a Wideband Code Division Multiple Access (W-CDMA) system (paragraphs 21 and 23; The preferred embodiments use two radio systems, i.e. the GSM and UMTS, which belongs to the third generation and is implemented by WCDMA technology).

Consider **claim 8**, Schwarz et al disclose a method of scheduling measurement for cells in a plurality of wireless communication systems, comprising: categorizing cells in a first wireless communication system based on a plurality of states; prioritizing the plurality of states; prioritizing cells in a second wireless communication system relative to the plurality of states; selecting a cell in the first system or the second system based on priorities of the cells in the first and second systems; and scheduling the selected cell for measurement in next available frame (paragraphs 69 and 70; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on



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the ranking. At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 9**, and **as applied to claim 8 above**, Schwarz et al disclose the claimed invention wherein the first system is a Global System for Mobile Communications (GSM) system and the second system is a Wideband Code Division Multiple Access (W-CDMA) system (paragraphs 21 and 23; The preferred embodiments use two radio systems, i.e. the GSM and UMTS, which belongs to the third generation and is implemented by WCDMA technology).

Consider **claim 10**, and **as applied to claim 8 above**, Schwarz et al disclose the claimed invention wherein cells in the second system are periodically scheduled for measurement (paragraph 62; The time pattern is periodic and repeated. The control information for controlling the cell change procedures can be periodic responding to the time element-specific requirements of the mobile communication system).

Consider **claim 11**, and **as applied to claim 8 above**, Schwarz et al disclose the claimed invention wherein updating states of the cells in the first system based at least on measurement results obtained from prior frames (paragraph 70; Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 21**, and **as applied to claim 8 above**, Schwarz et al disclose the claimed invention wherein the cells in the second system are given higher priority than the cells in the first system if a designated flag is set (paragraph 99; Indicates certain situations when intra- and

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inter-frequency and inter-radio access technology measurements are triggered on cells with a higher priority with the serving cell).

Consider **claim 22**, and as **applied to claim 21 above**, Schwarz et al disclose the claimed invention wherein ranking cells in the first system with same state, for each of the plurality of states, and wherein the selecting is further based on the ranking of the cells in the first system (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking).

Consider **claim 23**, and as **applied to claim 22 above**, Schwarz et al disclose the claimed invention wherein a highest-ranking cell with highest priority is selected for measurement in the next available frame (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking).

Consider **claim 24**, and as **applied to claim 23 above**, Schwarz et al disclose the claimed invention wherein highest-ranking cell with the highest priority is selected for measurement only if a frame that is used to make the measurement for the cell is potentially aligned with the next available frame (paragraphs 69 and 70; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking. At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 25**, and as **applied to claim 22 above**, Schwarz et al disclose the claimed invention wherein the cells in the first system with the same state are ranked based on received signal strength (paragraph 83; The user equipment shall be capable of tuning to the neighbor carriers, from which the suitable cell is selected. Tuning involved detecting and synchronizing the user equipment to the neighbor carriers. The user equipment searches all radio frequency channels within its bands of operation, take readings of received radio frequency signal levels on each channel, and calculate the signal levels for each).

Consider **claim 26**, and as **applied to claim 22 above**, Schwarz et al disclose the claimed invention wherein the cells in the first system with the same state are ranked based on elapsed time since last measurement (figure 6; paragraphs 6, 7, and 57; At least one element of said control information is adjusted, before the control information is received, according to a predetermined time pattern, thus forming adjusted control information. Therefore, the cell change procedures are controlled based on said adjusted control information).

Consider **claim 29**, Schwarz et al disclose an apparatus operable to schedule measurement for cells in a plurality of wireless communication systems, comprising: means for categorizing cells in a first wireless communication system based on a plurality of states; means for prioritizing the plurality of states; means for prioritizing cells in a second wireless communication system relative to the plurality of states; means for selecting a cell in the first system or the second system based on priorities of the cells in the first and second systems; and means for scheduling the selected cell for measurement in next available frame (paragraphs 69 and 70; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking. At

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least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 30**, and as **applied to claim 29 above**, Schwarz et al disclose the claimed invention wherein the apparatus further comprises means for updating states of the cells in the first system based at least on measurement results obtained from prior frames (paragraph 70; Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 31**, and as **applied to claim 29 above**, Schwarz et al disclose the claimed invention wherein the apparatus further comprises means for ranking cells in the first system with same state, for each of the plurality of states, and wherein a cell in the first system or the second system is selected further based on the ranking of the cells in the first system (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking).

Consider **claim 32**, Schwarz et al disclose a processor readable media for storing instructions operable in a wireless device to: categorize cells in a first wireless communication system based on a plurality of states; prioritize the plurality of states; prioritize cells in a second wireless communication system relative to the plurality of states; select a cell in the first system or the second system based on priorities of the cells in the first and second systems; and schedule the selected cell for measurement in next available frame (paragraphs 69 and 70; The measured

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cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking. At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

*Allowable Subject Matter*

**Claims 12-20, 27-28, and 33-36** are allowed.

Consider **claim 12**, the best prior art of record found during the examination of the present application, **Schwarz et al (United States Patent Application Publication #2006/0111110 A1)**, fail to specifically disclose, teach, or suggest wherein the plurality of states include an Unknown state, a Known Confirmed state, and a Known Unconfirmed state, the Unknown state including cells in the first system for which timing information and cell identification are not known, the Known Confirmed state including cells in the first system for which timing information is known and cell identification has been confirmed within last T seconds, where T is a predetermined time period, and the Known Unconfirmed state including cells in the first system for which timing information is known and cell identification has not been confirmed within last T seconds.

However, Schwarz et al only disclose that at least one element of said control information is adjusted, before the control information is received, according to a predetermined time pattern, thus forming adjusted control information. Therefore, the cell change procedures are controlled based on said adjusted control information.

Claims **13-20 and 27-28** are allowable because it is dependent upon claim 12.

Consider **claim 33**, the best prior art of record found during the examination of the present application, **Schwarz et al (United States Patent Application Publication #2006/0111110 A1)**, fail to specifically disclose, teach, or suggest wherein the cells in the first system for which timing information and cell identification are not known, cells in the first system for which timing information is known and cell identification has been confirmed within last T seconds, where T is a predetermined time period, and cells in the first system for which timing information is known and cell identification has not been confirmed within last T seconds.

However, Schwarz et al only disclose that at least one element of said control information is adjusted, before the control information is received, according to a predetermined time pattern, thus forming adjusted control information. Therefore, the cell change procedures are controlled based on said adjusted control information.

Claims **34-36** are allowable because it is dependent upon claim 33.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipoor whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.


If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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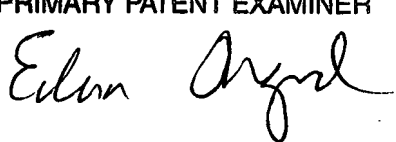
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

  
Bokhak Safaippour  
B.S./bs

June 18, 2007

EDAN ORGAD  
PRIMARY PATENT EXAMINER

 6/26/07